

Remarks:

Claims 1, 3-10, 12, 14-20, and 22-24 remain for consideration in this application.

In the most recent office action, the Examiner issued a revised restriction requirement. As the only claims remaining for consideration in this application belong to Group I, this requirement is moot.

The Examiner rejected claims 1-10 and 12-24 under 35 U.S.C. §112, second paragraph, as being indefinite for lacking reference to a standard activity or for being directed toward a qualitative measurement when claims depending therefrom encompass quantitative measurements. Both of claims 1 and 12 have been amended to include a limitation calling for the comparison of a first activity level with a standard. Applicants submit that these amendments obviate the §112, second paragraph, rejections.

Turning now to the prior art rejections, the Examiner rejected at least some of the claims as being anticipated by or obvious in view of Fobare et al., Yoshikawa et al., or Brunner et al. Claim 1 has been amended and is now directed toward a method determining the presence of an active drug in a fluid sample comprising the steps of providing a first fluid sample including an enzyme that is obtained from a patient and may or may not contain the drug, adding a quantity of a selected substrate to the fluid sample, measuring the activity level of the enzyme on the substrate, comparing the measured activity level with a standard activity level established by testing samples from individuals other than the patient that have a known quantity of active drug present, and determining the presence of the active drug by the measured activity level. Support for these amendments may be found in the specification on page 1, lines 6-7, page 6, lines 3-4 and 6-8. It is important to note

that the specification inherently teaches that the standard is established by testing samples from individuals other than the patient because it is an object of the invention to determine whether a drug is or is not present in a patient. In order to provide any meaningful standard, the standard must contain a known amount of the substance for which it is being tested. Therefore, because it is unknown whether the patient, and the fluid sample obtained from the patient, contains any level of active drug, the patient's own fluid cannot be a reliable standard and that the standard must be established from known samples taken from individuals other than the patient. Claim 12 is similar to claim 1 but is limited to the detection of ACE-inhibiting drugs.

Fobare et al. do not teach the step of adding a quantity of a selective substrate to the fluid sample. Fobare et al. only teach the testing of drug efficacy by initially testing a particular enzyme activity, adding the drug to the sample and testing the enzyme activity again to determine whether the drug is an inhibitor to the enzyme. Substrate is never added to the fluid sample. Nor is there any motivation to add a substrate to the fluid sample as Fobare et al. are only concerned with determining the inhibitory properties of a drug and are not concerned with determining whether a patient has a quantity of a certain drug present in his/her system.

Yoshikawa et al. teach a method of producing an ACE-inhibitor from naturally occurring materials. In determining the effectiveness of the inhibitor, Yoshikawa et al. provide a non-biological fluid, add a substrate and enzyme to the fluid and then determine the activity level of the enzyme. Therefore, the presently claimed step of providing a fluid sample obtained from a patient is not disclosed by Yoshikawa et al. In addition, Yoshikawa et al. do not teach the step of comparing the measured enzyme activity level with a standard activity level established by testing samples from

individuals other than the patient.

Brunner et al. teach a method for measuring the enzyme activity of ACE in a biological sample. The method comprises first taking a sample from an individual who is known to have no drug in his/her system. A baseline enzyme activity level measurement is taken. The individual then ingests a known quantity of drug and at certain time periods blood samples are collected and a substrate added to the sample in order to determine the enzyme activity. The enzyme activity post drug ingestion is compared to the baseline enzyme activity for the same individual. Brunner et al. use this method to determine the effectiveness of certain ACE-inhibiting drugs on a particular individual. The method taught by Brunner et al. does not anticipate nor render obvious several of the presently claimed limitations. First, the claims require that the patient being tested contain an unknown level of drug in his/her system. All subjects being tested by Brunner et al. are all known to not have any of the ACE-inhibiting drug in their system. Second, the standard by which the enzyme activities are compared in Brunner et al. is different than the standard activity level that is presently claimed. The "standard" activity level of Brunner et al. is a baseline reading from the same individual providing the fluid sample for enzyme activity level measurement post drug ingestion. The present claims recite that the measured enzyme activity level is compared with a standard activity level established by testing samples from individuals other than the patient who is providing the first fluid sample. This feature is essential as it is an object of the present invention to be able to ascertain whether or not a patient has a certain drug in their system without relying upon any input whatsoever from the patient. The presently claimed procedure allows for determining whether an unconscious patient is taking a drug, and how much drug they have taken, so that other medication

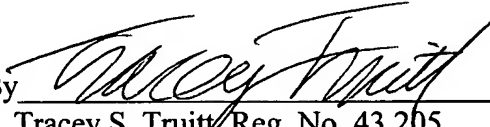
may be safely administered to the patient. Also, the presently claimed method enables an accurate determination of the presence of a drug when there is reason to doubt the patient's veracity. Neither of these two objectives could be accomplished by using the method taught by Brunner et al.

The secondary reference, Ryan et al., was cited as teaching the functional equivalence of assaying ACE in urine or serum. Ryan et al. do not overcome the shortcomings of Brunner et al. or Yoshikawa et al. Therefore, Applicants submit that the presently amended claims are allowable over the references of record in this application.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 19-0522.

In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

By 
Tracey S. Truitt, Reg. No. 43,205
HOVEY WILLIAMS LLP
2405 Grand Boulevard, Suite 400
Kansas City, Missouri 64108
816/474-9050

ATTORNEYS FOR APPLICANT(S)